

THE CLAIMS ARE:

1. A powered fishing reel which permits both motorized operation and manual operation of the fishing reel, the powered fishing reel comprising:

an enclosure;

5 a spool mounted to rotate on the enclosure;

a hollow shaft having a power end and a manual end mounted to rotate in the enclosure, the hollow shaft having a concentric opening through it;

means connecting the hollow shaft with the spool to rotate the spool;

10 a manual shuttle mounted to slide into and out of the concentric opening at the manual end of the hollow shaft and to engage the hollow shaft to rotate the hollow shaft;

a crank handle mounted on the manual shuttle;

a power shuttle mounted to slide into and out of the concentric opening at the power end of the hollow shaft to rotate the hollow shaft;

15 means to remove the manual shuttle from the hollow shaft when the power shuttle engages the hollow shaft;

a motor assembly including an electric motor and an upper member and a mount shaft, the mount shaft being mounted to rotate in the enclosure;

20 a gear assembly mounted in the enclosure, the gear means being connected to the power shuttle;

an electrical circuit including a switch and a power source, the electrical circuit being connected to the electric motor to energize the electric motor, the electric motor, the electric motor having a power shaft, a gear being mounted on the power

shaft; and

means to actuate the switch and engage the gear mounted on the power shaft with the gear assembly and the power shuttle with the hollow shaft.

5 2. A powered fishing reel according to claim 1 wherein the concentric opening in the hollow shaft has a multi-faced cross section.

3. A powered fishing reel according to claim 1 wherein the concentric opening in the hollow shaft has a hexagonal cross section.

10 4. A powered fishing reel according to claim 1 wherein the concentric opening in the hollow shaft has a multi-faced cross section and the external surface of the power shuttle is multi-faced.

5. A powered fishing reel according to claim 1 wherein the concentric opening in the hollow shaft has a multi-faced cross section and the external surface of the manual shuttle is multi-faced.

15 6. A powered fishing reel according to claim 1 wherein the concentric opening in the hollow shaft has a multi-faced cross section and the external surface of the power shuttle the external surface of the power shuttle are both multi-faced.

7. A powered fishing reel according to claim 1 wherein the motor assembly further includes two rods extending from the electric motor to the upper member, the mount shaft being substantially located at a right angle to the two rods.

20 8. A powered fishing reel according to claim 1 wherein the electric motor in the motor assembly has a power shaft and a face plate mounted on the electric motor about the power shaft and wherein the motor assembly further includes two rods connecting the face plate to the upper member and the mount shaft is located substantially at a

right angle to the two rods, the mount shaft being secured to the upper member.

9. A powered fishing reel according to claim 1 wherein the gear assembly includes a shaft with a reduction gear mounted on the shaft at one end and a shaft bevel gear mounted at the other end of the shaft.

5 10. A powered fishing reel according to claim 1 wherein the means to actuate the switch and engage the gear mounted on the power shaft with the gear assembly and the power shuttle with the hollow shaft includes a finger hook assembly having an L-shaped linkage and a finger hook for actuating the L-shaped linkage and a finger hook for actuating the L-shaped linkage, the L-shaped linkage further including prongs.

10 11. A powered fishing reel which permits both motorized operation and manual operation of the fishing reel, the powered fishing reel comprising:

a hollow shaft having a power end and a manual end mounted to rotate in the enclosure, the hollow shaft having a concentric opening through it, the concentric opening having a multi-faced cross section;

15 means connecting the hollow shaft with the drum to rotate the drum;

a shift shuttle slidably mounted in the concentric opening between the power end and the manual end;

a manual shuttle mounted to slide into and out of the concentric opening at the manual end of the hollow shaft and having an external surface with a configuration to engage the concentric opening;

a crank handle on the manual shuttle;

a power shuttle mounted to slide into and out of the concentric opening at the power end of the hollow shaft and having an external surface with a configuration to

engage the concentric opening, the power shuttle moving the shift shuttle and the shift shuttle forcing the manual shuttle out of the hollow shaft;

a power bevel gear mounted on the power shuttle;

5 a gear assembly mounted in the enclosure, the gear assembly including a shaft bevel gear at one end and a reduction gear at the other end, the shaft bevel gear engaging the power bevel gear.

10 a motor assembly including an electric motor with a power shaft at one end and an upper member at the other end and structural means connecting the electric motor with the upper member, the motor assembly further including a mount shaft located substantially at a right angle to the power shaft and toward the upper end from the power shaft and toward the upper member from the power shaft, a worm gear mounted on the power shaft;

15 a pad mounted on the upper member extending above the upper member; a gear assembly mounted to rotate in the enclosure including a shaft and a rotational gear and a shaft bevel gear, the shaft bevel gear engaging the power bevel gear;

an electrical circuit including a switch and a power source, the electrical circuit being connected to the electric motor to actuate the electric motor;

20 a finger hook assembly to move the contact to close the switch and to rotate the motor assembly to engage the worm gear with the reduction gear and to slide the power shuttle into the hollow shaft.

16. A powered fishing reel which permits both motorized operation and manual operation of the fishing reel, the powered fishing reel comprising:

an enclosure;

a spool mounted to rotate in the enclosure;

a hollow shaft having a power end and a manual end mounted to rotate in the enclosure, the hollow shaft having a concentric opening through it, the concentric opening having a multi-faced cross section;

5 means connecting the hollow shaft with the spool to rotate the spool;

a shift shuttle slidably mounted in the concentric opening between the power end and the manual end;

10 a manual shuttle mounted to slide into and out of the concentric opening at the manual end of the hollow shaft and having an external surface with a configuration to engage the concentric opening;

a crank handle mounted on the manual shuttle;

a power shuttle mounted to slide into and out of the concentric opening at the power end of the hollow shaft and having an external surface with a configuration to engage the concentric opening;

15 a motor assembly including an electric motor with a power shaft at one end and an upper member at the other end, a face plate being mounted on the electric motor about the power shaft, two rods connecting the face plate to the upper member, a mount shaft located substantially at a right angle to the two rods and the power shaft and being secured to the upper member, the mount shaft being mounted to rotate in the enclosure,

20 a worm gear being mounted on the power shaft;

a power bevel gear mounted on the power shuttle to rotate with the power shuttle, the power shuttle slidably engaging the power bevel gear;

an electrical circuit including a normally-closed switch and power source,

the electrical circuit being connected to the electric motor to actuate the electric motor;

a gear assembly including a shaft, a reduction gear mounted on the shaft at one end and a shaft bevel gear mounted at the other end of the shaft, the shaft being mounted to rotate in the enclosure;

5 a finger hook assembly including an L-shaped linkage and a finger hook with a notch in it for actuating the L-shaped linkage, the L-shaped linkage further including prongs, the finger hook assembly having an actuated position and an inactive position;

10 a hub, the power shuttle being mounted to rotate in the hub, the prongs of the I-shaped linkage engaging the hub;

a pawl, the notch of the finger hook engaging the pawl when the finger hook is held in the activated position, the finger hook engaging the pad on the motor assembly to rotate the motor assembly on the mount shaft moving the worm gear the contact with the reduction gear, the prongs sliding the power shuttle into the hollow shaft, the power shuttle pushing the shift shuttle which pushes the manual shuttle out of the hollow shaft;

15 a contact actuated by the hub to close the switch to actuate the electric motor, the engagement between the worm gear and the reduction gear being adapted to cause the motor assembly to rotate away from the reduction gear and the pad to move the finger hook off the pawl; and

20 a linkage spring to return the linkage assembly to its inactive position disengaging the power shuttle from the hollow shaft and opening the normally-closed switch.